Application:

The bus connection module 513BCM02 is designed to make the PKS RTU513 System Bus Signals accessible to the outside. ALARM (ALR) and WARNING (WRN) are signaled to the outside with relay contacts. An external minute impulse may be connected via an optocoupler. The filtered internal minute impulse is outputted as 24 V impulse. The 513BCM02 may only be   used in the WMS10. With this board two PKS RTU513 communication   boards   SLI01   and/or ETH01 are usable within the WMS10.

Characteristic

The bus connection 513BCM02 may only be used in the WMS10. The board is mounted to the plug-in terminal strips at slot address / board address 69/4 and 77/2. This gives the chance to use two PKS RTU513 boards at this slots. The power comes from the RTU513 boards and a 24 V cable. The signals ALARM and WARNING are distributed with relay contacts. On signaling ALARM the signal WARNING is activated also.

ALARM and WARNING are supervised from a watchdog. They are activated if the communication modules do not respond within 30 seconds. At the isolated minute impulse input TSI an external minute impulse may connected to the RTU513 boards. This minute impulse is evaluated from the time master function. The internal filtered minute impulse is available at the minute impulse output TSO.

PKS

Peyman Khotoot Shargh

Operation

The bus connection module 513BCM02 may only be mounted at a defined position on the sub-racks WMS10. The 513BCM02 supervises the system activation V Signals the ALARM and WARNING V Handles the I/O synchronization. The power supply 5V be caused by RTU513 Module. In additional the power supply 24V is necessary. The bus connection module 513BCM02 is not configurable.

Mounting the Module

The 513BCM02 must be mounted at slot 69/4 and 77/2 on the WMS10 sub-rack or on slot 21/4 and 29/2 on the WMS10. The board is mounted to the plug-in terminal strips of the existing slots of the racks .
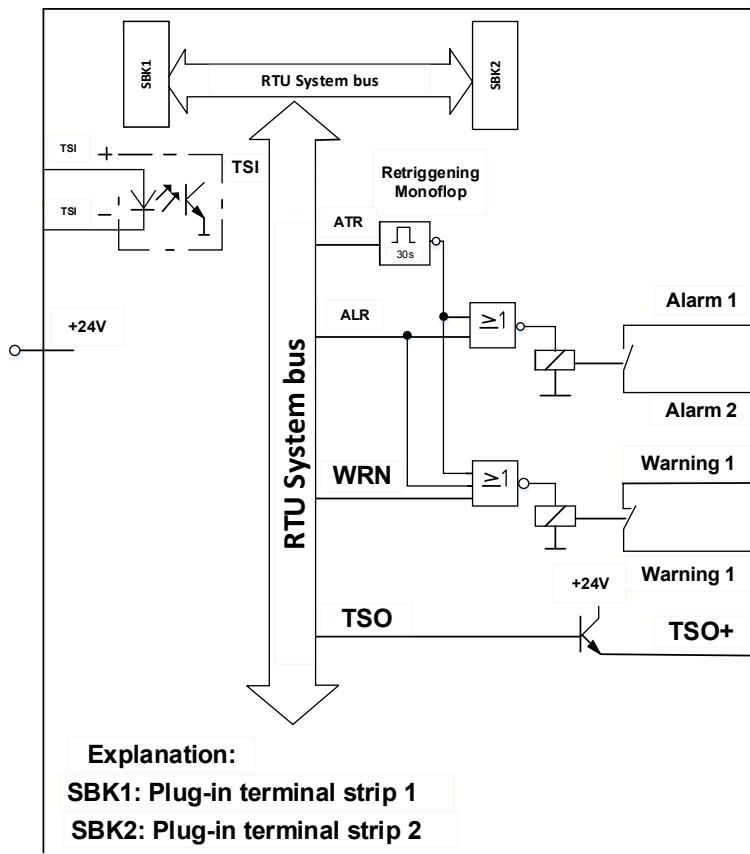

Fig. 1: Block diagram Bus connection module
513BCM02

Peyman Khotoot Shargh

Power supply

The connection cable 24V has to be plugged in the 24V connector of the WMS10. The MWMS10 has no 24V fasten connection. Therefore it is accompanied by an 80cm extension that has to be connected to the power supply (48PSM10/48PSM12). For the supply voltage of the MWMS10 and the 513BCM02 the same power supply unit has to be used.

Watchdog

The activity on the PKS RTU513 bus is supervised by a retriggering mono flop. ALARM and WARNING are activated if the RTU modules do not respond within about 30 seconds.

Alarm and Warning

ALARM and WARNING are activated by the watchdog or by a RTU513 communication unit. On signaling ALARM the signal WARNING is also activated.

Minute pulse input TSI

The RTU513 communication units can be synchronized by the TSI input. Connecting the minute pulse input TSI.

Minute pulse output TSO

The RTU513 communication units generate an internal filtered minute pulse TSO. With this signal the other modules will be synchronized .Connecting the minute pulse output TSO.

PKS
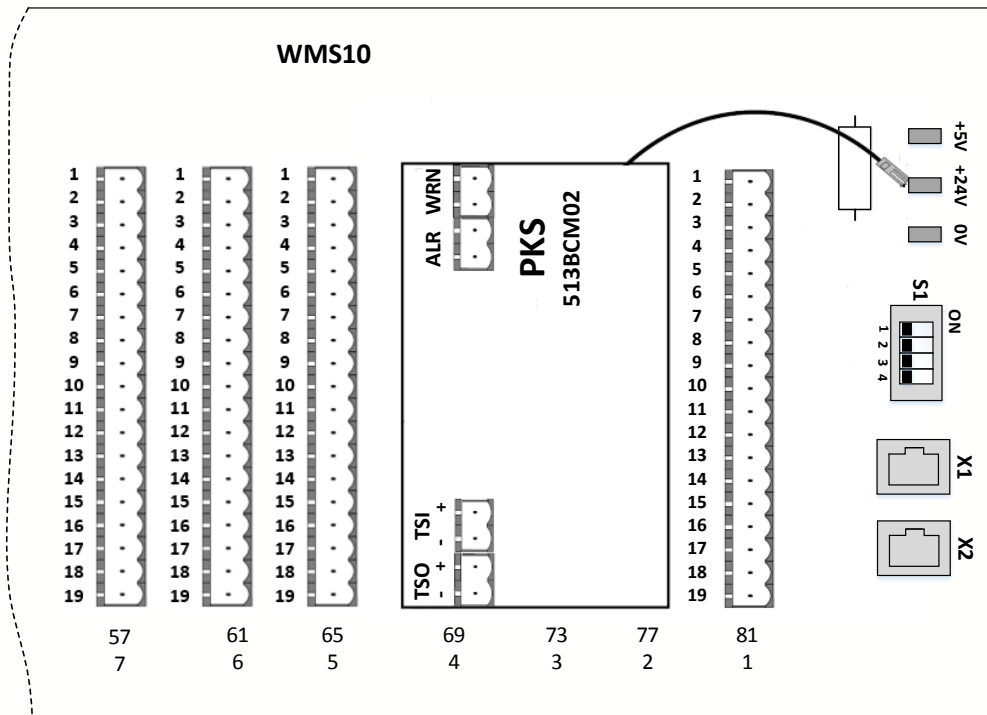
Peyman Khotoot Shargh

Setting

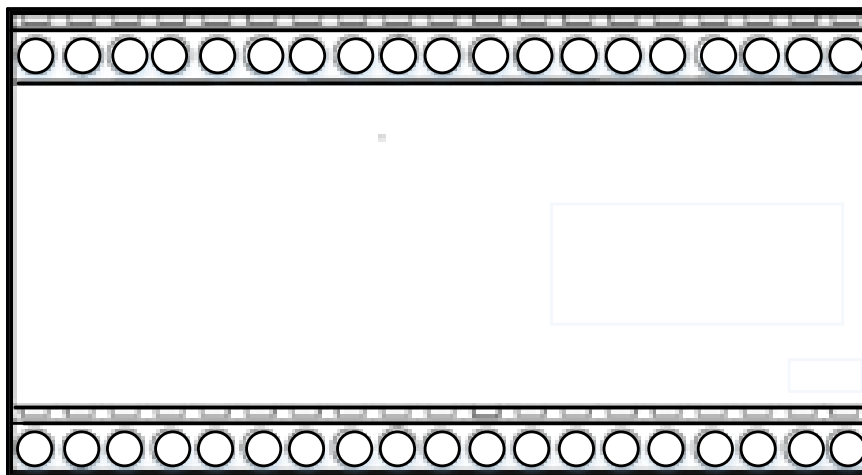**Fig.2: Installation the 513BCM02 in an extension Subrack WMS10**
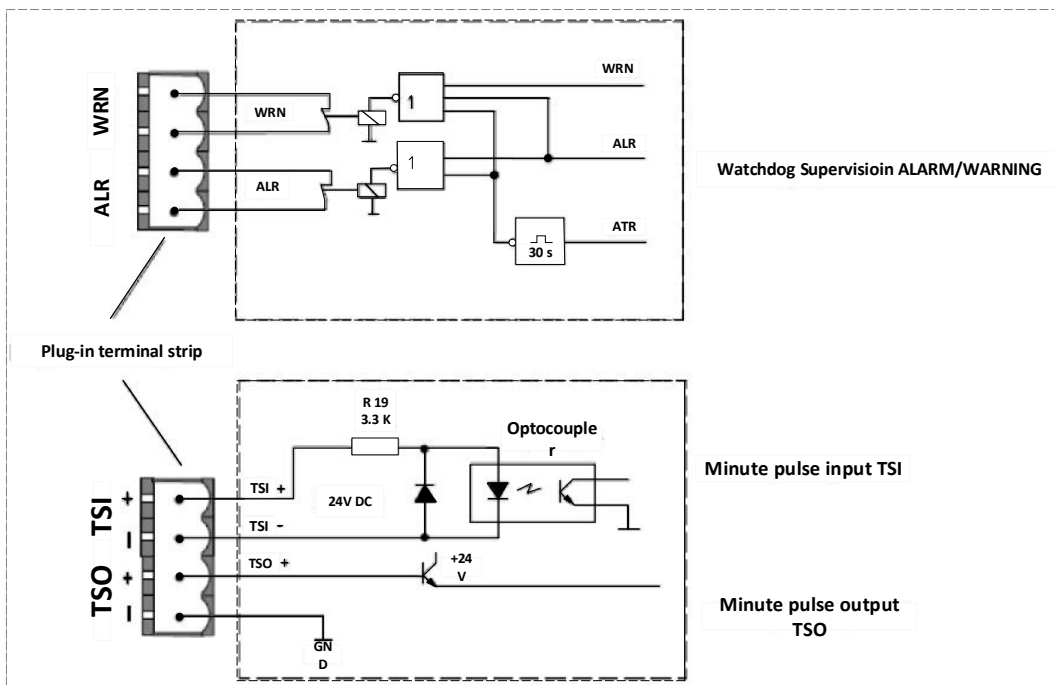
Fig. 3: Logic block diagram of internal plug-in terminal strip wiring

Peyman Khotoot Shargh

Setting
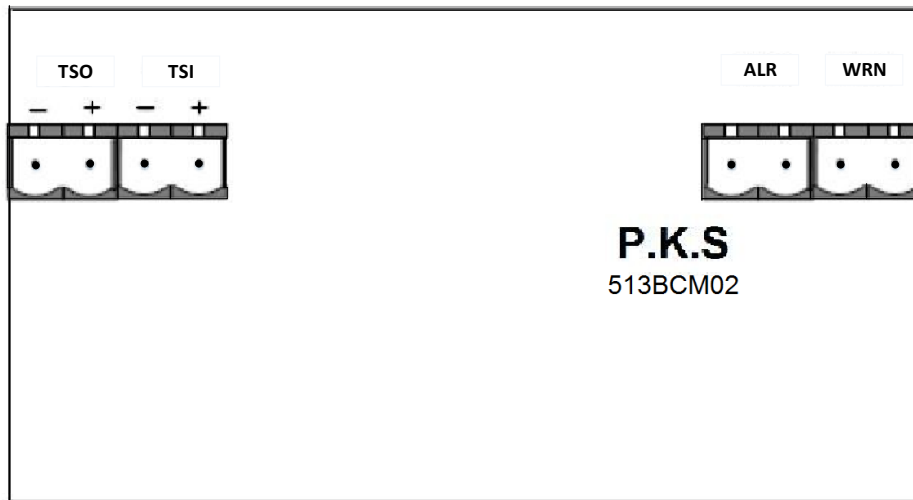
Front Side

Back Side

Fig.4: Front- and back view the 513BCM02

Technical Data

In addition to the PKS RTU 513 general technical data, the following applies:

Environmental conditions

Temperature	0 ... 70 ℃
Relative humidity	5 ... 95 % (non condensing)

Power Supply

Supply	5 V / app. 80 mA 24 V / app. 80 mA

Mechanical Layout

PCB	100 x 55 mm
Weight	App. 0.2 kg

connection types

connector	2 pluq-in terminal strips 18 pole each

Minute impulse input

TSI:	plug-in terminal strip 2-pole isolated, 24 V input
Minute impulse output	
TSO:	plug-in terminal strip 2-pole 24 V output.
Signal outputs	
Alarm-/Warning:	plug-in terminal strip
Output:	2-pole each
Relay contact:	active closed Warning set also with Alarm ≤ 1A/ ≤ 60 V DC / ≤ 30 W
Watchdog	
Supervision time:	30 sec.

PKS

Peyman Khotoot Shargh